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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,860	02/11/2002	Tadashi Katafuchi	218249US0DIV	2638

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EXAMINER	
JOHNSON, JERRY D	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/068,860	KATAFUCHI ET AL.	
	Examiner	Art Unit	
	Jerry D. Johnson	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6,7,10,13,16 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6, 7, 10, 13, 16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6, 7 and 10, 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zoleski et al.

Zoleski et al., U.S. Patent 4,375,418, teach a lubricating oil composition for use in medium and high speed marine diesel engine crankcases which has a Total Base Number from about 5 to about 40 (column 2, lines 21-24) and contains a mineral lubricating oil, about 0.1-5, preferably about 0.5-2.0, weight percent of an overbased calcium sulfonate, 0.1-7 weight percent of an overbased sulfurized calcium phenate, a zinc dihydrocarbyl dithiophosphate, an alkenylsuccinimide and a friction reducing amount of at least one acyl glycine oxazoline derivative (abstract; column 2, line 64 to column 3, line 11; column 4, lines 60-65). The composition comprises from about 0.5 to 10 weight percent of a nitrogen-containing succinimide dispersant as disclosed in column 2, lines 49-63. When the variable x is zero, as specifically disclosed in column 2, line 63, the alkenylsuccinimide is the product of ethylene diamine and succinic acid compound in a molar ratio of 1. The nitrogen-containing dispersants are disclosed in, *inter alia*, U.S. Pat No. 3,172,892 (Le Suer et al.) which is incorporated by reference (column 4, lines 19-22). Le Suer et al., U.S. Patent 3,172,892 teach nitrogen-containing dispersants which are the reaction products of polyisobutenyl succinic anhydride with diethylene triamine (Examples 1 and 8) or ethylene diamine (Examples 2 and 6). The lubricating base oil advantageously has a viscosity SUS at 100°F of between about 50 and 1500, preferably between 100 and 1200 (column 6, lines 35-39. The most preferred lubricating viscosity for a crankcase lubricating oil composition is a viscosity ranging from about 56 to 68 SUS at 210° F (column 6,

lines 39-42). While Zoleski et al. differ from the instant claims in not being limited to the compositions of the instantly claimed method, it would have been obvious to one having ordinary skill in the art at the time the invention was made to follow the above teachings and arrive at the instantly claimed method.

Claims 6, 7 and 10, 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zoleski et al. as applied to claims 6, 7, 10, 13, 16 and 17 above, and further in view of Le Suer et al. and EP 0 839 894 A1.

Le Suer et al., U.S. Patent 3,172,892, teach a process for the preparation of alkenylsuccinimide dispersants of the instant claims (e.g., Example 1 of Le Suer et al.). In column 4, lines 19-22, Zoleski et al. teach the use of those dispersants.

EP 0 839 894 A1 (EP '894) teaches lube oil compositions for diesel engines, and more particularly to lube oil compositions suitable for use as cylinder oils for two-cycle marine engines (page 2, lines 7-8) comprising (A) at least one compound selected from the group consisting of overbased sulfonates of alkaline earth metals, over based phenates of alkaline earth metals, and salicylates of over based alkaline earth metals and (B) a bis-type succimic imide (page 2, lines 47-52). Compound (A) may be used singly or in combination. It is preferably incorporated in an amount of 5-40% by weight (page 5, lines 17-18). The total acid number of the compositions is preferably adjusted to fall within the range from 30 to 150 mgKOH/g, preferably 40 to 100 mgKOH/g. Total acid number of less than 30 mgKOH/g may fail to neutralize acids perfectly, whereas total acid number of higher than 150 mgKOH/g may increase the ash content in the lube oil, raising the risk of producing great amounts of deposit during long-term use (page 6, lines 1-4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the alkenylsuccinimide dispersants of Le Suer et al. in a lubricating oil composition for use in medium and high speed marine diesel engine crankcases as taught by Zoleski et al. because Zoleski et al. specifically teach that those dispersants may be used. Additionally, it would have been obvious to include at least one compound selected from the group consisting of overbased sulfonates of alkaline earth metals, over based phenates of alkaline earth metals, and salicylates of over based alkaline earth metals in an amount of 5-40% by weight as taught by EP '894 in order to "perfectly" neutralize acids.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 13 fail to further limit the claims from which they depend.

Applicant's arguments filed October 7, 2004 have been fully considered but they are not persuasive.

Applicants argue that the "additional data for internal pressure increase after 20 seconds" for Table 1-1 Example 1 and Example 4 shows that Example 1 has a higher corrosion, wear-resisting ability than Example 4 and that he results could not have been predicted by the applied prior art.

The "additional data for internal pressure increase after 20 seconds" should be presented in a declaration in order to be considered. Furthermore, applicants have not show that the

internal pressure change between 20 seconds and 30 seconds is significant or would be unexpected to one having ordinary skill in the art.

Applicants argue the preferred alkenyl succinimide embodiments of Zoleski et al. are outside the terms of the present claims, Zoleski et al. do not specially disclose any polyamines having a carbon/nitrogen weight ratio of 1.14 and the comparative data demonstrates that results are better when outside the preferred range of x of Zoleski et al.

Under 35 U.S.C. 103, prior art references are to be considered for all subject matter fairly disclosed either alone or together for what they teach the worker of ordinary skill in the art. *In re Metcalf,* 294 F.2d 558, 157 USPQ 423. Accordingly, Zoleski et al. is not limited to specific examples or preferred teachings of the disclosure. Further, not withstanding applicants arguments to the contrary, Le Suer et al., which is incorporated by reference by Zoleski et al. (column 4, lines 19-22), specifically discloses polyamines having a carbon/nitrogen ratio of 1.14. See Examples 1 and 8 of Le Suer et al.

Page 9, lines 4-7 of the Remarks state:

> If the Examiner continues to maintain the above rejection, the Examiner is requested to identify what in Zoleski et al is considered to be the closest prior art to the presently-claimed invention, and to specifically respond to the above argument that a result for a non-preferred embodiment that is better than the result for a preferred embodiment is necessarily unexpected.

As noted above, Zoleski et al. incorporates the disclosure of Le Suer et al. by reference. Thus the closest prior art in Zoleski et al. are Examples 1 and 8 of Le Suer et al. As to the argument that a result for a non-preferred embodiment that is better than the result for a preferred embodiment is necessarily unexpected, the preferred dispersants of Zoleski et al. are preferred

based on their dispersant properties and applicants have not shown that the claimed dispersant are superior in dispersant properties.

Applicants argue

> if one skilled in the art were to combine Katafuchi with Zoleski et al., one skilled in the art would choose the bis-type succinic imide compound of Katafuchi. The Examiner cannot choose from Katafuchi those disclosures that support the rejection, but ignore teachings against it. (Remarks, page 8).

Applicants' argument lacks merit.

Katafuchi (EP '894) has been relied on as teaching that lube oil compositions suitable for use as cylinder oils for two-cycle marine engines (page 2, lines 7-8) comprise at least one compound selected from the group consisting of overbased sulfonates of alkaline earth metals, overbased phenates of alkaline earth metals, and salicylates of overbased alkaline earth metals wherein the overbased additive is preferably incorporated in an amount of 5-40% by weight (page 5, lines 17-18), the total acid number of the lubricant composition is preferably adjusted to fall within the range from 30 to 150 mgKOH/g, preferably 40 to 100 mgKOH/g. Katafuchi further teaches that total acid number of less than 30 mgKOH/g may fail to neutralize acids perfectly, whereas total acid number of higher than 150 mgKOH/g may increase the ash content in the lube oil, raising the risk of producing great amounts of deposit during long-term use (page 6, lines 1-4). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made include at least one compound selected from the group consisting of overbased sulfonates of alkaline earth metals, overbased phenates of alkaline earth metals, and salicylates of overbased alkaline earth metals in an amount of 5-40% by weight as taught by EP '894 in order to "perfectly" neutralize acids in a marine diesel lubricating oil composition as taught by Zoleski et al.

Applicant's argument that "one skilled in the art would choose the bis-type succinic imide compound of Katafuchi", is speculative and ignores the teachings of Zoleski et al. Further, Applicants' argument, if accepted, would improperly remove the teachings Zoleski et al. from the available prior art, i.e., applicants' argument in essence is an argument that the claims are not obvious over Katafuchi alone.

Furthermore, applicants' claims do not exclude the bis-type alkenyl succinic imides of Katafuchi. Page 7 , lines 3-6 of applicants' specification teaches:

> It is presumed that the reaction products, succinimide compounds are of a novel type of mixtures composed of bis-type compounds, mono-type compounds and other types of compounds judging from the features of the product.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (571) 272-1448. The examiner can normally be reached on 6:00-3:30, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jerry D. Johnson
Primary Examiner
Art Unit 1764

jdj